



Division of Special Education and Counseling
California State University, Los Angeles

Spring, 2024

EDSP 4661: - Advanced Braille Codes for Individuals with Visual Impairments (3 units)
Section 1

Instructor: Gina Michell
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Class Location:KHB2018
Class Day/Time: Wed 7:25-10:10pm
Office Hours: Tuesday 4:00-6:00 PM
[Sign Up for Office Hours Here](#)
[Office Hours Link](#)

Catalog Description:

Prerequisite EDSP 4000 or instructor consent.

Pre/Co-requisite: EDSP 4651

Advanced scientific and mathematical braille code, basic music, foreign language, and computer braille (ASCII), including supporting Science, Technology, Engineering, Arts and Mathematics education for students with visual impairments.

Professional Statements:

A. Theme and Conceptual Framework for Professional Preparation

The faculty members of the Charter College of Education have adopted the organizing theme of "Preparing Educators to Serve the Culturally and Linguistically Diverse Population of Urban Schools and Related Institutions of the 21st Century" for all programs for professional educators at California State University, Los Angeles. This theme is reflected in this course by course content and performance standards; lecture topics; suggested readings; and rubrics described in this syllabus. The diagram at the end of the syllabus provides the conceptual framework for the theme and supports the preparation of professional educators by the members of the Cal State LA Charter College of Education faculty.

B. Statement of Reasonable Accommodation

The Charter College of Education faculty members fully support the Americans with Disabilities Act (ADA). The members of the faculty will provide reasonable accommodation to any student with a disability who is registered with the Office of Students with Disabilities (OSD) who needs and requests accommodation. The faculty member may wish to contact the OSD to verify the presence of a disability and confirm that accommodation is necessary. The OSD will arrange and provide for the accommodation. Reasonable accommodation may involve allowing a student to use an interpreter, note taker, or reader; accommodation may be needed during class sessions and for administration of examinations. The intent of the ADA in requiring reasonable accommodation is not to give a particular student an unfair advantage over other students, but simply to allow a student with a disability to have an equal opportunity to be successful.

OSD is located on the first floor of the Administration Bldg. Room 127 (near Financial Aid and Registrar). The office can be contacted at OSD@calstatela.edu or (323)343-3140.

Other student supports on the Cal State L.A. Campus:

- **Student Health Services:** <http://www.calstatela.edu/studenthealthcenter>
- **Food Pantry:** University Student Union Room 308
- **CalFresh Outreach Center:** <http://www.calstatela.edu/studentervices/calfresh>
- **Graduate Writing Support Program:** <http://www.calstatela.edu/graduateresourcecenter/graduate-writing-support-program>
- **Glazer Family Dreamers' Resource Center:** <http://www.calstatela.edu/ab540>

All Gender Restrooms:

- La Kretz Hall, Floors 1, 2, and 3
- Library Palmer Wing, LPW 1065 and LPW 1067
- Salazar Hall, Applied Gerontology, SH 107 and SH 108
- Simpson Tower, ST 821 and ST 822
- Student Union, Second Floor
- Theater Arts, TA 126

Lactation Rooms

Please contact the Title IX Coordinator at 323.343.3041 to request access.

- Administration, ADM 304
- King Hall, KH 154A
- Salazar Hall, SH 129A
- University Student Union, USU 206

C. Student Conduct

Student conduct is viewed as a serious matter by the faculty members in the Charter College of Education. The Charter School faculty members assume that all students will conduct themselves as mature citizens of the campus community and will conduct themselves in a manner congruent with university policies and regulations. Inappropriate conduct is subject to discipline as provided for in Title 5, California Code of Regulations (see Student Conduct: Rights and Responsibilities, and Student Discipline, Cal State LA eCatalog). Academic honesty is expected of all students in the Charter College, in accordance with University policy. There are established university reporting procedures if a student is suspected of committing an academically dishonest act.

*****Please read relevant sections of the APA manual regarding plagiarism and academic scholarship*****

D. Technology

Courses in the Charter College of Education require a high level of technological literacy along with access to current technology in order to assure student success. In all undergraduate, credential, certificate and graduate courses, students in the CCOE are expected to:

- Have access to an internet accessible device that will meet the technology requirements of the course in which the student is enrolled.
- Have sufficient working knowledge of this device, its applications and operating system to use it for their classes, as well as how to keep its operating system and applications up to date.
- **Use a Cal State LA email account for all course and university-related communication.**
- Access the current campus learning management system (e.g., Canvas) on a regular basis as required by the course in which they are enrolled.

- Use campus technology resources including the Cal State LA portal, Open Access labs and ITS Help Desk as needed.

Students should anticipate that their use of these skills will be integrated into courses within their programs. Students who are unable to meet any of the above expectations are strongly advised to take an introductory technology course or ITS workshop upon enrollment in the Charter College of Education.

Land Acknowledgment

Every community owes its existence and vitality to generations from around the world who contributed their hopes, dreams, and energy to making the history that led to this moment. Some were brought here against their will, some were drawn to leave their distant homes in hope of a better life, and some have lived on this land for more generations than can be counted. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference. We begin this effort to acknowledge what has been buried by honoring the truth. We are currently occupying ancestral land of the Tongva people. In our work to promote social justice in education we must always consider the many legacies of violence, displacement, migration, and settlement that bring us together here today.

This statement is drawn from the U.S. Department of Arts and Culture #HonorNativeLand initiative. You can learn more here (<https://usdac.us/nativeland>) and through additional resources posted on our course Canvas page.

Division Canvas Site: Special Education Programs, Information, and Resources

The Division hosts a Canvas site called Special Education Programs, Information, and Resources to provide information about fieldwork, master's programs, the comprehensive exam, and the Clear credential and induction. It also has forms students frequently need including add and drop forms, course overlap, and advancement to candidacy, among others. Students are encouraged to self-enroll into the course if it does not already show on your Canvas page. Call the Division of Special Education and Counseling office if you need assistance (323-343-4400) or email Vicki Kim at vkim6@calstatela.edu.

For COVID-19 related information and questions, please check Cal State LA's [Health Watch](#) sites regularly for updates.

Email Policy:

Please email me @ gina.michell4@calstatela.edu. I check my e-mail several times during the week and once on weekends. If you send a message, I will get back to you as soon as possible. However, please note that I can receive hundreds of emails each day, and occasionally emails are missed. Emails will generally be replied to within 48-hours of being read. If you do not hear from me within 72-hours, please do not hesitate to send a friendly reminder or second email. As always, professional discourse and courtesy is appreciated in the tone of all emails. For immediate assistance during business hours, call the division of Special Education and Counseling, 323-343-4400.

In addition, weekly office hours will be held. My office hours are a block of time dedicated to advisement, and students should plan to communicate with me about course-related matters during this time. Office hours times sign-up link can be found at the top of the syllabus.

Notes:

In accordance with the California Commission on Teacher Credentialing, candidates in the Education Specialist Credential Program in Visual Impairment and Blindness must participate in a minimum of 600 hours of fieldwork and be observed by a university supervisor a minimum of 24 times throughout the duration of their program. This course provides candidates with **10 hours of fieldwork** experiences and **1 observation**.

Student Learning Outcomes

Upon completion of this course, students will be able to:

SLO 1: Read and write Nemeth or Unified English Braille (UEB) Mathematical Braille and scientific notation.

SLO 2: Transcribe science and mathematics lessons into Nemeth Code.

SLO 3: Transcribe and format the math (linear and spatial) and science educational materials, including standardized tests, worksheets, and benchmark assessments.

SLO 4: Follow the rules for usage of Nemeth or UEB Mathematical Braille code in science and mathematics.

SLO 5: Follow the rules for and teach the use of the abacus for basic math computation.

SLO 6: Demonstrate skills necessary for consultation, collaboration, and support of braille instruction and STEAM education with general education teachers, including being able to articulate professional philosophies for braille education which are culturally and linguistically responsive.

SLO 7: Identify symbols used in foreign language i.e. braille transcription such as accent marks, tildes, and other markings.

SLO 8: Transcribe worksheets and/or parent letters into Spanish Braille.

SLO 9: Adapt teaching materials for learners of foreign languages in braille.

SLO 10: Identify symbols and signs for the transcription of the music braille code, and transcribe a simple piece of music for an elementary-aged student.

SLO 11: Describe the importance of music as a form of leisure and recreation and select strategies for incorporating music in students' education.

SLO 12: Identify symbols and signs for the transcription of computer braille code, including transcription of email, website addresses and computer related notations into braille.

Teacher Performance Expectations Addressed in this Class (Highlighted TPE's in Blue that are covered in this course)

TPE's	
Engaging and Supporting Students in Learning	<ol style="list-style-type: none"> 1. Apply knowledge of students... 2. Maintain ongoing communication with students and families... 3. Connect subject matter to real-life contexts and provide active learning experiences to engage students... 4. Use a variety of developmentally and ability-appropriate instructional strategies, resources, and assistive technology, including principles of Universal Design of Learning (UDL) and Multi-Tiered System of Supports (MTSS) to support access to the curriculum... 5. Promote students' critical and creative thinking and analysis... 6. Provide a supportive learning environment for students' first and/or second language acquisition... 7. Provide students with opportunities to access the curriculum by incorporating the visual and performing arts... 8. Monitor student learning and adjust instruction...

Creating and Maintaining Effective Environments for Student Learning	<ol style="list-style-type: none"> 1. Promote students' social-emotional growth, development... 2. Create learning environments (i.e., traditional, blended, and online) that promote productive student learning 3. Establish, maintain, and monitor inclusive learning environments... 4. Know how to access resources to support students 5. Maintain high expectations for learning with appropriate support... 6. Establish and maintain clear expectations for positive classroom behavior ...
Understanding and Organizing Subject Matter for Student Learning	<ol style="list-style-type: none"> 1. Demonstrate knowledge of subject matter... 2. Use knowledge about students and learning goals to organize the... 3. Plan, design, implement, and monitor instruction consistent with current subject-specific pedagogy... 4. Individually and through consultation and collaboration..., plan for effective subject matter instruction... 5. Adapt subject matter curriculum, organization, and planning to support the acquisition and use of academic language within learning ... 6. Use and adapt resources, standards-aligned instructional materials... 7. Model and develop digital literacy by using technology to engage students and support their learning... 8. Demonstrate knowledge of effective teaching strategies w technology standards
Planning Instruction and Designing Learning Experiences for Students	<ol style="list-style-type: none"> 1. Locate and apply information about students' current academic status, content- and standards-related learning needs and goals... 2. Understand and apply knowledge of the range and characteristics of typical and atypical child development to help inform instructional planning... 3. Design and implement instruction and assessment that reflects the interconnectedness of academic content areas... 4. Plan, design, implement and monitor instruction, making effective use of instructional time... 5. Promote student success by providing opportunities for students... 6. Access resources for planning and instruction... 7. Plan instruction that promotes a range of communication strategies and activity modes ... 8. Use digital tools and learning technologies across learning environments....
Assessing Student Learning	<ol style="list-style-type: none"> 1. Apply knowledge of the purposes, characteristics, and appropriate uses of different types of assessments* 2. Collect and analyze assessment data from multiple measures and sources to plan and modify instruction... 3. Involve all students in self-assessment and reflection on their learning goals and progress... 4. Use technology as appropriate to support assessment administration, conduct data analysis... 5. Use assessment information in a timely manner to assist students and families in understanding student progress in meeting learning goals... 6. Work with specialists to interpret assessment results from formative and summative assessments... 7. Interpret English learners' assessment data to identify their level of academic proficiency in English... 8. Use assessment data, including information from students' IEP, IFSP, ITP, and 504 plans, to establish learning goals and to plan, differentiate, make accommodations and/or modify instruction.
Developing as a Professional Educator	<ol style="list-style-type: none"> 1. Reflect on own teaching practice and level of subject matter and pedagogical knowledge... 2. Recognize own values and implicit and explicit biases... 3. Establish professional learning goals and make progress to improve practice.... 4. Demonstrate how and when to involve other adults and to communicate effectively with peers and colleagues, families... 5. Demonstrate professional responsibility for all aspects of student learning and classroom management... 6. Understand and enact professional roles and responsibilities as mandated reporters... 7. Critically analyze how the context, structure, and history of public education in California affects and influences...

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In addition, weekly office hours will be held. My office hours are a block of time dedicated to advisement, and students should plan to communicate with me about course-related matters during this time. Office hours times sign-up link can be found at the top of the syllabus.

Turnaround/Feedback

As a student, you should expect to receive assignment feedback within 10-days of the due date (not submission date). You are permitted to submit assignments early; however, I may not start grading them until the due date has passed. Final grades for the course will be posted in alignment with university grading timelines.

Course Schedule

Date	Learning Topics	Activities	Assignments/Readings Due	TPEs
Week 1 1/24	<ul style="list-style-type: none"> Syllabus Overview and Review of Assignments Introductions 	<ul style="list-style-type: none"> Syllabus Scavenger Hunt 	N/A	N/A
Week 2 1/31	<ul style="list-style-type: none"> Chapter 1 – Nemeth Code Symbols Used in Grades Pre-K-1 Slate and stylus review 	<ul style="list-style-type: none"> Classwork for Chapter 1 	<ul style="list-style-type: none"> Syllabus Scavenger Hunt Slate & Stylus Instruction Reading: BANA's position that literacy comes in many forms, including use of the slate & stylus 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 3 2/7	<ul style="list-style-type: none"> Chapter 2 – Additional Nemeth Code Symbols and Formats Used in Grades Pre-K-1 Abacus – Use of Abacus, Counting Method, Setting Numbers and Beginning Addition & Subtraction 	<ul style="list-style-type: none"> Classwork for Chapter 2 	<ul style="list-style-type: none"> Nemeth & Braille Homework 1 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 4 2/14 Asynch	<ul style="list-style-type: none"> Music Braille Spanish Braille 	<ul style="list-style-type: none"> Music and Spanish Braille Practice 	<ul style="list-style-type: none"> Nemeth Braille Homework 2 Abacus Homework 1 Abacus Homework 2 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 5 2/21 Asynch	<ul style="list-style-type: none"> Mathspeak QuickTack ASCII Code 	<ul style="list-style-type: none"> Mathspeak, QuickTack and ASCII Code Practice 	<ul style="list-style-type: none"> Music Braille Spanish Braille 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13

Week 6 2/28	<ul style="list-style-type: none"> Chapter 3 – Introduction to Nemeth Code Symbols Used in Grades 2-6 Abacus Continued – Addition and Subtraction with Synthesis (regrouping) 	<ul style="list-style-type: none"> Classwork for Chapter 3 	<ul style="list-style-type: none"> Mathspeak, Homework QuickTack Homework ASCII Code Homework 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 7 3/6	Review Chapters 1-3	<ul style="list-style-type: none"> Review Activities 	<ul style="list-style-type: none"> Nemeth & Braille Homework 3 Abacus Homework 3 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 8 3/13 Asynch	QUIZ 1 – Chapters 1-3, PBW, S&S Available 7:00am-11:59pm	<ul style="list-style-type: none"> Quiz 	Quiz 1	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13 Literacy TPE 7.5a
Week 9 3/20	<ul style="list-style-type: none"> Chapter 4 – Spatial Arrangements and Number Lines Used in Grades K-6 	<ul style="list-style-type: none"> Classwork for Chapter 4 	N/A	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 10 3/27	<ul style="list-style-type: none"> Chapter 5 – Fractions, Mixed Numbers and Grouping Symbols Used in Grades 3-8 	<ul style="list-style-type: none"> Classwork for Chapter 5 	<ul style="list-style-type: none"> Nemeth & Braille Homework 4 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
4/3	SPRING BREAK	ENJOY!		
Week 11 4/10 Asynch	<ul style="list-style-type: none"> Chapter 6 – Superscript, Subscript, Radicals, Prime, Greek Letters and Shapes 	<ul style="list-style-type: none"> Classwork for Chapter 6 	<ul style="list-style-type: none"> Nemeth & Braille Homework 5 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 12 4/17	<ul style="list-style-type: none"> Chapter 7 - Modifiers, More on Tally Marks, Functions, Roman Numerals, Signs of Comparison, Modified Shapes, etc. 	<ul style="list-style-type: none"> Classwork for Chapter 7 	<ul style="list-style-type: none"> Nemeth & Braille Homework 6 Math/Science Fieldwork & Reflection	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 13 4/24	<ul style="list-style-type: none"> Chapter 8 - Nemeth Code Symbols Used in Algebra 1, Algebra 2, and Advanced Mathematics 	<ul style="list-style-type: none"> Classwork for Chapter 8 	<ul style="list-style-type: none"> Nemeth & Braille Homework 7 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 14 5/1	<ul style="list-style-type: none"> Presentations QUIZ 2 – Chapters 1-8, Abacus & Reading 	<ul style="list-style-type: none"> Quiz Unit Plan Presentations During Class 	<ul style="list-style-type: none"> Nemeth & Braille Homework 8 Math or Science Unit Plan 	VI 3.1, 3.2, 3.3, 3.4, 3.7, 3.9, 3.10, 4.2, 4.13
Week 15 5/8	<ul style="list-style-type: none"> Introduction to Technology 	<ul style="list-style-type: none"> CSB Workshop on Technology Distribute Mock Comps 	<ul style="list-style-type: none"> Braille Brain Quiz 2 	VI 1.7, 1.8, 2.2, 3.8, 3.11, 3.13, 4.3, 4.4
Week 16 5/15 Asynch	Mock Comps – Perkins Braille Writer, Slate & Stylus, Oral Reading, Nemeth Code and Interlining/Proofreading	<ul style="list-style-type: none"> Mock Comps 	<ul style="list-style-type: none"> Mock Comps (Due by 10PM) 	VI 1.2, 1.4, 2.1, 2.4, 4.10, 4.11, 4.12, 4.14

Required Texts and Articles

Required Texts and Materials

Required Texts

1. Holbrook, M.C., McCarthy, T., & Kamei-Hannan, C. (Eds.). (2017). *Foundations of education: History and theory of teaching children and youths with visual impairments* (3rd ed., Vol. I). American Printing House for the Blind. [Volume I](#)
2. Holbrook, M.C., Kamei-Hannan, C., & McCarthy, T. (Eds.). (2017). *Foundations of education: Instructional strategies for teaching children and youths with visual impairments* (3rd ed., Vol. II). American Printing House for the Blind. [Volume II](#)

Required Downloads

1. Learning and Teaching the Nemeth Code within UEB Contexts: A Step-By-Step Guide (PDF Download available in Canvas)
2. Livingston, R. (1997). *Use of the Cranmer Abacus* (2nd ed.). Austin, TX: Texas School for the Blind and Visually Impaired. (PDF Download available in Canvas)
3. California Department of Education (2004). [CA Braille Mathematics Standards](#). – Free Download
4. [Common Core State Standards](#) – Free Download
5. Braille Authority of North America (BANA) [Guidance for Transcription Using the Nemeth Code within UEB Contexts](#) – Free Download

Required Software

1. Software- [Perky Duck](#) – Free Download for PC and MAC computers through Duxbury Systems
2. [QuickTac Software](#) – Free Download

Required Materials

1. Occluders (or sleep shade), Perkins Braille Writer, slate and stylus, standard 11x11 ½ braille paper, 8 ½ x 11 braille paper, and a [Cranmer abacus](#) ([APH Cranmer Abacus](#))

Recommended Texts:

2. Roberts, H., Krebs, B., & Taffet, B. (N.D.). [An Introduction to Braille Mathematics](#). National Library of Congress, Washington: National Library Service for the Blind and Physically Handicapped. (ISBN 0-8444-0190-0) – Free Download
3. Edman, P. K. (1992). [Tactile Graphics](#): American Foundation for the Blind (AFB), New York.
4. Cleveland et al., [Nemeth at a Glance: A Math Resource, Grade-Level Chart, and Evaluation Tool](#), Texas School for the Blind and Visually Impaired, 2017.
5. Resources from TSBVI visit their [Instructional Resource Library](#)

Grading

Assignments	Due	Points
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1. Weekly Classwork	See Canvas and Course Schedule Above	5 pts x 8 = 40
2. Weekly Braille Homework	See Canvas and Course Schedule Above	35 pts x 8 = 280
3. Advanced Codes Homework (8 assignments in total - including abacus, Spanish, music, ASCII, QuickTac, MathSpeak)	See Canvas and Course Schedule Above	10 pts x 8 = 80
4. Quizzes (2 quizzes)	See Canvas and Course Schedule Above	50 pts x 2 = 100
5. Field Work (online observation of a High School Math or Science Class and narrative reflection)	See Canvas and Course Schedule Above	40 points
6. Tactile Graphics Unit Plan and Group Presentation (see information below)	See Canvas and Course Schedule Above	60 points
7. Take Home Final – (Mock Braille Comps)	See Canvas and Course Schedule Above	50 pts
8. Braille Brain	See Canvas and Course Schedule Above	50 pts
Total		700 points

Division Grading Scale

Points	Percentage	Grade
658-700	94% -100%	A
630-657	90% - 93.99%	A-
609-629	87% - 89.99%	B+
588-608	84% - 86.99%	B
560-587	80% - 83.99%	B-
539-559	77% - 79.99%	C+
518-538	74% - 76.99%	C
490-517	70% - 73.99%	C-
469-489	67% - 69.99%	D+
448-468	64% - 66.99%	D
427-447	61% – 63.99%	D-
0-426	0% – 60.99%	F

Note: The minimum passing score for this class is a B-

Instructor Policy about Late Assignments:

All deadlines are firm and non-negotiable except in genuine emergencies. Please plan ahead so that personal and school events do not cause you to be unable to meet deadlines. These *do not* constitute valid reasons to fail to meet them. In the case of a genuine emergency, contact instructor to discuss your needs. Any assignment given permission to be turned in late will lose 10% of its point value. Late assignments are due in accordance with the agreement made between the student and the instructor.

Incompletes will be granted only in accordance with university policy.

Assignment Descriptions and Rubrics

Assignment List

Assignment #1: Weekly Classwork: In-Class Transcriptions or other in-class assignments

For each of these assignments you will be given print copies of math and/or science problems that corresponds to the week's topics. You will transcribe these print copies into braille using Nemeth code. Directions will be unique to each assignment. Braille portions must be completed in class using a Perkins Braille Writer. Assignments will be turned in to the instructor during class hours, and no later than 6pm on the day of class. ONE POINT will be subtracted for each error, including each braille cell of omitted characters/word/s, repeat errors, erasures that can be felt or that are in blank cells, and contractions. Refer to examples in the online references if you are unsure of braille symbols to use, and braille slowly. You will **not** be able to make-up missed classwork if you are absent or re-do assignments. Late assignments will **not** be accepted.

Assignment #2: Weekly Braille Homework Assignments

For each of these assignments you will be given directions that are unique to the assignment. They may include transcription of math and/or science problems into Nemeth code, literary braille practice, interlining, identifying errors/strengths/weaknesses, and adapting worksheets. Some assignments may be completed online using Nemeth Tutorial, and others may require braille using a Perkins Braille Writer. ONE POINT will be subtracted for each error, including each braille cell of omitted characters/word/s, repeat errors, erasures that can be felt or that are in blank cells, and contractions. Please take your time with the assignments, proofread them, and redo them before turning them in (if necessary). Use resources to proofread your assignments, and braille slowly. You will **not** be able to re-do assignments, & **late assignments will not** be accepted.

Assignment #3: Advanced Codes Homework Assignments

For each of these assignments you will be given directions that are unique to the assignment. They may include abacus, Spanish, music, ASCII, QuickTac, and MathSpeak. ONE POINT will be subtracted for each error, including each braille cell of omitted characters/word/s, repeat errors, erasures that can be felt or that are in blank cells, and contractions. Please take your time with the assignments, proofread them, and redo them before turning them in (if necessary). Use resources to proofread your assignments, and braille slowly. You will **not** be able to re-do assignments, & **late assignments will not** be accepted.

Assignment #4: Quizzes

Quizzes will include information from braille assignments including: (a) interlining/overwriting, (b) transcription of literary code and computer braille using a Perkins Braille Writer (c) transcription of literary code using a slate and stylus, (d) transcription of math or science using Nemeth code, (e) oral reading of contracted literary braille code, and (f) abacus lessons.

Assignment #5: Field Work & Narrative Reflection

In this project you will need to observe an online, general education high school math or science lesson. During your observation take notes of all the activities that occur during the class and describe the materials used by the teacher and students (see worksheet). You will also review a math or science textbook to reflect on the challenges this material poses for students with visual impairments. Links to textbooks will be provided to you. Fill out the worksheet provided, then, write a 3-5 page narrative reflection about your observation. **See further instructions and grading rubric below.**

Assignment #6: Tactile Graphics Unit Plan (5 tactual models/diagrams/drawings and 5 formal written lesson plans) & Group Presentation

In this assignment you will create a series of 5 tactile models/diagrams/drawings and graphics that can be used to introduce and teach the symbols and concepts, including the use of a 3D printed model. You will also write an introduction and 5 lesson plans to coordinate with each of the tactile graphics that you have created. **See further instructions and grading rubric below.**

Assignment #7: Take Home Final – Mock Braille Competency Exam

This take-home exam will help to prepare you for the final braille competency exam. A mock exam will contain all of the sections and formatting you are ultimately going to be tested on. The sections include: a) literary braille using a Perkins braille writer, b) literary braille using a slate and stylus, c) Nemeth code using a Perkins braille writer, d) interlining/proofreading, e) oral reading at expected rate of 25 words per minute

Braille Brain: Braille Brain Nemeth tutorial units will be assigned throughout the semester. These self-paced tutorials serve as reinforcement for the content and will be independent practice following your viewing of the weekly presentation. Each practice unit must be completed with a score of 80% or better to receive full credit. Braille Brain is a mandatory assignment. Visit <https://braillebrain.aphtech.org/nemeth> to begin. Be sure the “Use QWERTY 6 dot entry” box is checked, just below the header.



It is recommended that you keep up with the Braille brain units throughout the semester. However, the entire program is not due until week 15. Please note that Braille Brain units do not align with the course textbook. You will be completing the Braille Brain units out of order. Select the appropriate unit for the topics included in class.

Grading Rubrics:

Grading rubrics will be used for the math/science observations and the tactile graphics unit plan. They are included at the end of the syllabus.

Extra Credit Points:

Course related extra credit activities may be provided at instructor’s discretion.

Signature Assignments

Math or Science Fieldwork and Reflection

Purpose

Advanced academic courses in high school can be challenging for a student with visual impairments for a variety of reasons. Some of the issues faced in these classes can be dealt with in 1:1 lessons between the VI student and VI teacher. In this project you will need to observe an online, general education high school math or science lesson

Skills

The purpose of this assignment is to help you practice the following skills that are essential to your success in this course / in school / in this field / in professional life beyond school:

<p>VI1.2 Select and develop assessment and teaching strategies for core and expanded core curriculum areas including accommodations and modifications that address age (birth-22 years old), visual impairment, family values and priorities, visual prognosis, and other individual characteristics across settings and tasks, including addressing learner needs for individuals with a wide range of abilities and functional vision (including ocular and cerebral visual impairments), and individuals with co-occurring disabilities (including autism and deaf blindness).</p>
<p>VI1.4 Select, adapt, and use nonvisual/alternate instructional strategies to address student needs for individuals from birth-22 years old who have a wide range of abilities and functional vision (including ocular and cerebral visual impairments), possibility of co-occurring disabilities (including individuals with autism and/or Deaf-blindness), and other individual characteristics.</p>
<p>2.1 Identify and implement environmental accommodations and modifications to facilitate optimal sensory use and multisensory access to, and active participation in, individual and group activities in general and expanded core curriculum environments, including addressing learner needs for individuals with a wide range of abilities and functional vision (including ocular and cerebral visual impairments) and co-occurring disabilities (including autism and Deaf-Blindness).</p>
<p>4.10 Create, adapt, and format documents, including text, images, graphics, and video to improve accessibility based on individual needs.</p>
<p>4.11 Use basic methods to adapt and format inaccessible media, text, images, graphics, and video to improve usability for students with visual impairments.</p>
<p>4.12 Provide systematic, explicit braille literacy instruction using balanced instructional approaches for teaching literacy skills to students, embossed materials, and digital technologies to meet individual needs</p>
<p>4.14 Teach students to access, interpret, and create increasingly complex 3-dimensional, printed, and digital graphics in visual and/or tactile forms, including maps, charts, diagrams, objects, and tables, based on individual needs.</p>
<p>4.23 Teach self-determination skills usually acquired visually based on individual needs related to self-knowledge, self-advocacy and empowerment, assertiveness, informed decision making, problem solving, goal setting, and self-directed and self-regulated behavior to facilitate inclusion across settings.</p>

Knowledge

This assignment will also help you to become familiar with the following important content knowledge in this discipline:

2.4 Use ergonomics and appropriate technology settings aligned with students' preferred learning media, such as illumination and size control, color and contrast (visual) settings, speech output (auditory) settings, braille input/output and other tactual displays, mouseless computing (tactile) settings, and low tech strategies to support ubiquitous computing to promote access to the general and expanded core curriculum.

Tasks

1. Observe one class period of High School math or science.
2. During your observation take notes of all the activities that occur during the class and describe the materials used by the teacher and students (see worksheet below).
3. Fill out the worksheet provided.
4. Look at the textbook for the class or a sample textbook for the subject area you observed (see resources in Canvas).
5. Note challenges that may be encountered in the textbook (graphics, charts, images, etc.). Fill out the worksheet provided. Additional resources are provided to view non-classroom lessons in a variety of content areas. These are a supplemental resource and cannot be used to meet the requirements of this assignment.
6. Then, write a 3-5 page narrative reflection about your observation. Include the following information: (see grading rubric below).
 - Describe the class you observed (e.g. grade, content area, lesson length, lesson topic, etc.)
 - Discuss what concepts and pre-requisite knowledge are needed to understand the lesson.
 - Describe the methods of instruction, materials **and** participation used during the lesson (e.g. recorded lecture, self-paced module, smartboard, 3D models, PowerPoint, graphics, call and response, small group activities, etc.)
 - Provide a reflective analysis of the general education setting, subject matter, role of the VI teacher, collaborative opportunities, necessary consultation/in-service, and children from specialized populations (e.g. deaf-blind, multiple disabilities, at-risk, ELL, CLD, and gifted learners).
 - Describe in detail the challenges/successes that a child with low vision **and** a child who is blind may face during classroom activities.
 - Describe in detail the challenges/success that the following specialized populations may face during classroom activities: a) at-risk learners, b) children with multiple disabilities, c) deaf-blind, d) English language learners and children from culturally linguistically diverse backgrounds, e) children who are gifted, **and** f) typically developing children.
 - Describe adaptations and accommodations needed for a child who is blind and a child who is low vision to access the lesson given these conditions: a) at-risk learners, b) children with multiple disabilities, c) deaf-blind, d) English language learners and children from culturally

linguistically diverse backgrounds, e) children who are gifted, **and** f) typically developing children.

Tips for Success

- Identify the classroom you will observe early.
- Provide a copy of the assignment to the classroom teacher so that they understand your tasks and can be prepared to show you a textbook.

Submission Format

Your narrative reflection and worksheet will be uploaded into Canvas

Timeframe

This assignment is due on **[Insert Date]**

Criteria for Success

- Follow the guidelines for the activity
- Be complete and error free
- Submitted on time

This Assignment is Worth 40-Points

Worksheet: Fill out the chart for each activity that occurs during the lesson (use additional sheets if necessary).

Activity	Objective	Materials Used	Teacher Prompt	Student Response

Name:

Grade & Subject Area:

Criteria for observation and 3-5 page narrative reflection	Points
Description of the class: The narrative reflection includes a description of the class (e.g. grade, content area, lesson length, lesson topic, etc)	Out of 2 points
Description of methods of instruction, materials and participation: The narrative includes a thorough description of how the instruction was presented, what materials were used and the expected student response/participation. (e.g. recorded lecture, self-paced module, smartboard, 3D models, PowerPoint, graphics, call and response, small group activities, etc.)	Out of 3 points
Discussion of Math/Science Activities: The narrative includes a description of the activities that occurred, pacing, prompting, student responses/behavior, and transitions that took place during the observation?	Out of 5 points
Reflection: The narrative includes a reflective analysis of the general education setting, subject matter, role of the VI teacher, collaborative opportunities, necessary consultation/in-service, and children from specialized populations (e.g. deaf-blind, multiple disabilities, at-risk, ELL, CLD, and gifted learners).	Out of 5 points
Discussion of challenges/successes of student who is visually impaired: The narrative includes a discussion of things that would be challenging and successful for a student with a visual impairment, and things in which the student would excel, including children from specialized populations.	Out of 5 points
Discussion of challenges/successes of specialized populations: The narrative includes a discussion of things that would be challenging and successful for a student with a visual impairment, and: a) at-risk learners, b) children with multiple disabilities, c) deaf-blind, d) English language learners and children from culturally linguistically diverse backgrounds, and children who are gifted.	Out of 5 points
Discussion of concepts/pre-requisite skills: The narrative includes an analysis of the types of concepts and skills a student must understand to be able to successfully participate in the activities and how the development and/or introduction of these concepts may differ for a student who is visually impaired.	Out of 5 points
Adaptations/Accommodations: The narrative includes a thorough discussion of types of accommodations that should be considered, and types of adaptations to materials that would be needed. Consider a student who is low vision compared with a student who is blind, and consider students of specialized populations.	Out of 5 points
Individual Observation Worksheet: Completed Chart is thorough and detailed	Out of 5 points
TOTAL Points (out of 40 points)	

Comments:

Math or Science Unit Plan

Purpose

Teaching tactile graphics requires a breakdown of skills and training to understand various textures, lines, shapes, and the abstract symbolism for the raised drawings. In this assignment you will work in small groups (2-3 people).

Skills

The purpose of this assignment is to help you practice the following skills that are essential to your success in this course / in school / in this field / in professional life beyond school:

<p>VI1.2 Select and develop assessment and teaching strategies for core and expanded core curriculum areas including accommodations and modifications that address age (birth-22 years old), visual impairment, family values and priorities, visual prognosis, and other individual characteristics across settings and tasks, including addressing learner needs for individuals with a wide range of abilities and functional vision (including ocular and cerebral visual impairments), and individuals with co-occurring disabilities (including autism and deaf blindness).</p>
<p>VI1.4 Select, adapt, and use nonvisual/alternate instructional strategies to address student needs for individuals from birth-22 years old who have a wide range of abilities and functional vision (including ocular and cerebral visual impairments), possibility of co-occurring disabilities (including individuals with autism and/or Deaf-blindness), and other individual characteristics.</p>
<p>2.1 Identify and implement environmental accommodations and modifications to facilitate optimal sensory use and multisensory access to, and active participation in, individual and group activities in general and expanded core curriculum environments, including addressing learner needs for individuals with a wide range of abilities and functional vision (including ocular and cerebral visual impairments) and co-occurring disabilities (including autism and Deaf-Blindness).</p>
<p>4.10 Create, adapt, and format documents, including text, images, graphics, and video to improve accessibility based on individual needs.</p>
<p>4.11 Use basic methods to adapt and format inaccessible media, text, images, graphics, and video to improve usability for students with visual impairments.</p>
<p>4.12 Provide systematic, explicit braille literacy instruction using balanced instructional approaches for teaching literacy skills to students, embossed materials, and digital technologies to meet individual needs</p>
<p>4.14 Teach students to access, interpret, and create increasingly complex 3-dimensional, printed, and digital graphics in visual and/or tactile forms, including maps, charts, diagrams, objects, and tables, based on individual needs.</p>
<p>4.23 Teach self-determination skills usually acquired visually based on individual needs related to self-knowledge, self-advocacy and empowerment, assertiveness, informed decision making, problem solving, goal setting, and self-directed and self-regulated behavior to facilitate inclusion across settings.</p>

Knowledge

This assignment will also help you to become familiar with the following important content knowledge in this discipline:

2.4 Use ergonomics and appropriate technology settings aligned with students' preferred learning media, such as illumination and size control, color and contrast (visual) settings, speech output (auditory) settings, braille input/output and other tactual displays, mouseless computing (tactile) settings, and low tech strategies to support ubiquitous computing to promote access to the general and expanded core curriculum.

Tasks (See Rubrics Below)

1. Based on the classroom observations from your field work, choose a math or science concept that requires tactile graphics.
2. Research what types of graphs and charts are needed to introduce, instruct, practice, and assess the concepts (you will present this project to the class).
3. Create a series of 5 tactile models/diagrams/drawings and graphics that can be used to introduce and teach the symbols and concepts. Consider the hierarchy of tactile skill development, as you create the materials. **At least one lesson must include the use of a 3D model.** Email the file to instructor and include a graphic representation of the 3D model with the unit plan. You are not required to "create" a model from a 3D printer. You are required to write the use of a 3D model into the unit and provide a link to the file that would create the model if you had access to a 3D printer. These files can be found online for free. I usually use Thingiverse.
4. Finally, write an introduction **and 5 lesson plans** to coordinate with each of the tactile graphics/models that you have created, see grading rubric for specific requirements.

LESSON PLAN NOTE: Each student is responsible for writing 1 lesson plan for the unit using the Cal TPA Lesson Planning template and Lesson Narrative template (available in Canvas). Please fill in as much information as you can given the unit you are creating and the student population you selected for the unit. Some of the information will be duplicated across lessons (e.g. Prior Academic Knowledge and Student Learning Needs may be the same for all 5 lesson plans). **Please put your name on the lesson plan you wrote.**

Tips for Success

- Identify your group early
- Identify which tasks each group member will be responsible for
- Stay in communication and be organized!

Submission Format

- Your lessons and adaptations will be presented in class
- Your lesson plans will be uploaded into Canvas

Timeframe

This assignment is due on **[Insert Date]**

Criteria for Success

- Follow the guidelines for the activity
- Be complete and error free
- Submitted on time

This Assignment is Worth 60-Points

**Tactile Graphics Unit Plan & Group Presentation
Grading Rubric**

Names:

Written Introduction to the Unit Plan (10 points):

<i>An overall written introduction for your unit plan will preface the lesson plans by providing an overview of the unit. Include the following in your Introduction.</i>	
	Comments
<i>Unit Plan Introduction – What concept is being developed in the unit (i.e. x, y coordinate planes; trigonometric functions; cell structure)? What is the context for the unit plan (i.e. to graph a line using points on and x, y coordinate plane; to understand trigonometric functions; to participate in experiments using a microscope in biology class)? For what age/grade/ level and subject matter is the unit designed?</i>	
<i>Purpose –What is the overall purpose of the unit plan?</i>	
<i>Progression & Rationale – What is the overall progression of skills and what achievement is expected for the overall unit? What is the rationale for introducing concepts in the order that you determined?</i>	
<i>Materials – What materials were used in preparing the models, diagrams, drawings, and why did you choose those materials?</i>	

Written Lesson Plans (15 points):

<i>One lesson plan must be written for each component of the unit. You must have a minimum of 5 components. The components should represent each phase of instruction needed using a scaffolding approach to introduce the tactile graphic.</i>	
	Comments
<i>Lesson Plan Key Question & Purpose – What is the most important question that students are expected to be able to answer, after completing each lesson? State the purpose of each lesson plan</i>	
<i>Lesson Plan Instructional & Background Information – State the necessary background information and factual information that students need to know before beginning this lesson.</i>	
<i>Lesson Plan Materials – List the materials that are needed for each lesson.</i>	

<i>Lesson Plan Method/Procedure</i> – State a detailed procedure that you will follow when teaching the lesson. Include specific strategies you will use to teach the lesson.	
<i>Lesson Plan Evaluation Criteria</i> – State how you will evaluate the student’s performance and what data you will collect from this lesson.	
<i>Lesson Plan Data Collection</i> – Create a data collection sheet that will measure overall progress for the unit and evaluate student performance.	

Tactile Graphics (15 points):

<i>Tactile Graphic Models/Diagrams/Drawings</i> – Models and graphics are represented clearly in tactile form (not cluttered, legibly labeled, sharply raised, etc.)	
<i>Materials</i> – Appropriate materials were chosen and a variety of medium used	
<i>Concept</i> – The series of graphics develop the concept/skill in sequential and logical order. Models used represent graphic images; diagrams and drawings build upon one another to help with concept development	
<i>Representation</i> – Chosen representation includes necessary components of concept and is accurate	
<i>Effort & Creativity</i> – Effort and creativity was used in the design	

Presentation (10 points):

<i>Presentation includes a discussion of grade level, discussion of unit plan/lesson plans, explanation of models and graphic representations as follows:</i>	
Unit Plan & Lesson Plans: Unit plan and lesson plans were discussed including how you prepared, planned, and created each model, diagram, graphic; how the chosen representations progress to teach the concept; how well thought out was the whole unit; and what was the rationale for the sequencing of each lesson?	
Discussion of each of the Tactile Graphics: Each model, diagram, graphic was discussed including how the group modified the concept to meet the objective and they incorporated accessible/meaningful activities for a child with a visual impairment that developed concepts related to the tactile graphic; graphics and that built upon one another.	
Effort: The students demonstrated appropriate effort, creativity, and effectiveness on the overall project (including adaptations of print graphics and lesson plans) and during the presentation?	

3D Model (10 points):

3D model is used as part of the hierarchy of learning in one or more lesson plans. Includes file reference with STL (or similar) extension with	
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a graphic representation of model. Thingiverse reference and a graphic representation of model also acceptable.	
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Total Points: (of 60)

**Fieldwork Observation – University Supervisor Observation
Grading Rubric – EDSP 5661
Math or Science Unit Plan**

Name:

Observation (10 points):

Grading is scored on a scale of 1-5 (1 = TPE is not met; 2 = TPE is emerging; 3 = TPE met at expected level of a beginning teacher; 4 = TPE met at advanced level; 5 = TPE met at mentor or master teacher level. (Note: when there is no opportunity to observe a competency use rating n/o = not observed):

Criteria	Points
VI1.2 Select and develop assessment and teaching strategies for core and expanded core curriculum areas including accommodations and modifications that address age (birth-22 years old), visual impairment, family values and priorities, visual prognosis, and other individual characteristics across settings and tasks, including addressing learner needs for individuals with a wide range of abilities and functional vision (including ocular and cerebral visual impairments), and individuals with co-occurring disabilities (including autism and deaf blindness).	
VI1.4 Select, adapt, and use nonvisual/alternate instructional strategies to address student needs for individuals from birth-22 years old who have a wide range of abilities and functional vision (including ocular and cerebral visual impairments), possibility of co-occurring disabilities (including individuals with autism and/or Deaf-blindness), and other individual characteristics.	
VI 2.1 Identify and implement environmental accommodations and modifications to facilitate optimal sensory use and multisensory access to, and active participation in, individual and group activities in general and expanded core curriculum environments, including addressing learner needs for individuals with a wide range of abilities and functional vision (including ocular and cerebral visual impairments) and co-occurring disabilities (including autism and Deaf-Blindness).	
VI 2.4 Use ergonomics and appropriate technology settings aligned with students' preferred learning media, such as illumination and size control, color and contrast	

(visual) settings, speech output (auditory) settings, braille input/output and other tactual displays, mouseless computing (tactile) settings, and low tech strategies to support ubiquitous computing to promote access to the general and expanded core curriculum.	
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Comments:	



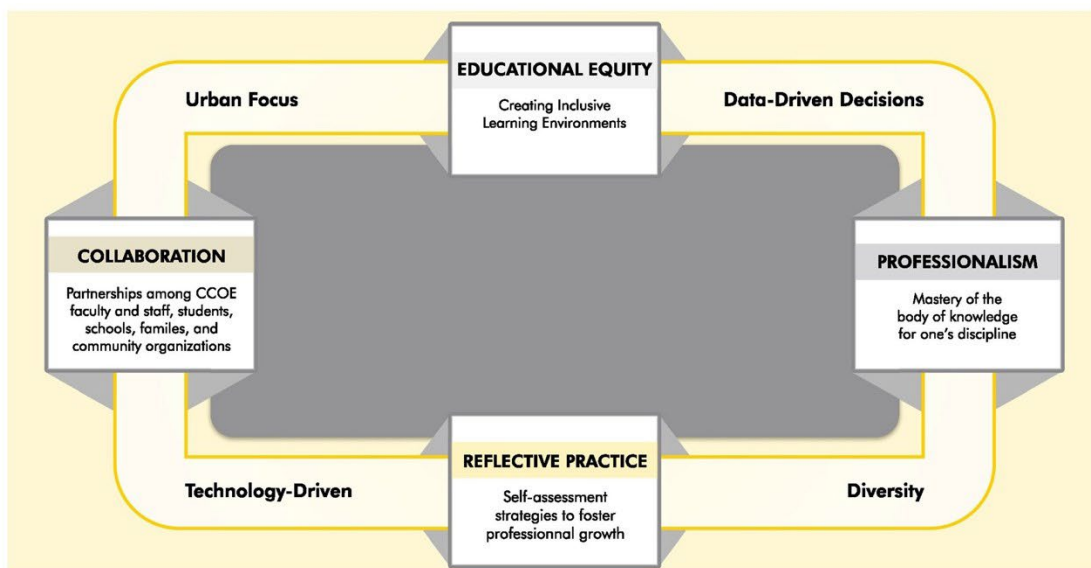
CONCEPTUAL FRAMEWORK

VISION:

The College of Education is a learning community of faculty, administrators, staff, students, and community members that work collaboratively to ensure that all students receive a high-quality education, honor the diversity of all learners, advocate for educational and community reforms, develop reflective practices that promote equity, and facilitate the maximum learning and achievement potential of all children and adults.

MISSION:

The COE mission is to develop in students the professional knowledge, skills, and dispositions to promote the academic, social, and psychological development of diverse learners in urban schools and related agencies. COE graduates become teachers, special educators, school administrators, educational technologists, researchers, program evaluators, school psychologists, counselors, rehabilitation professionals, higher education faculty, and other education specialists. Within an environment of shared governance, COE professional preparation programs utilize data-driven decision-making, technology-integrated instruction, meaningful curricula, and outcome-based assessments to ensure high-quality educational opportunities for all students.



CORE VALUES:

The Charter College of Education prepares outstanding and caring educators, counselors, and leaders to work with diverse learners in urban schools and related agencies guided by the following core values.

EDUCATIONAL EQUITY

We believe in creating inclusive learning environments with equitable educational opportunities for all learners, including those with disabilities and those from diverse culture, linguistic, and socio-economic backgrounds. We believe everyone can learn if given the opportunity and support. We honor the dignity of every individual and hold high academic expectations for all learners. We value diversity because it enriches the quality of everyone's learning.

REFLECTIVE PRACTICE

We believe that COE students should develop reflective practices, including self-assessment strategies to foster professional growth. We promote the deliberate application of knowledge to practice and the constant reflective analysis of one's practice in relation to school and/or community needs.

PROFESSIONALISM

We believe professionalism is mastery of the body of knowledge for one's discipline and the demonstration of cultural, technological, ethical, and professional competencies. COE courses and professional preparation programs are designed to teach professional dispositions, skills, and/or knowledge.

COLLABORATION

We believe that collaborations and partnerships among COE faculty and staff, students, schools, families, and community organizations enhance educational excellence, urban school and related agency transformations, and educational access and equity for all learners. Meaningful and lasting educational collaborations and partnerships are grounded in understanding the complexity of all stakeholder's needs and their interdependence, and we advocate that all COE professional preparation programs build collaborations and partnerships.